

REMARKS

Claims 1-5 are pending. All claims are under examination.

The Specification

With a single exception the changes to the specification requested by the Examiner in paragraph 1 of the last Office Action have been made. The exception relates to the change requested in paragraph 1(f) to page 3, lines 26-27. As amended herein this portion of the specification is now accurate. It is hoped that the Examiner will find this to be satisfactory.

Drawings

New drawings are submitted herewith in compliance with the request by the Examiner in paragraph 2 of the last Office Action.

Priority Issues

In the last office action the Examiner stated that applicant has not filed a certified copy of the PCT/JP02/00668 application [the '668 application] as required by 35 USC 119(b). See the Office Action mailed 8/10/2004; page 4, line 5.

However priority rights in the '668 application are not claimed under the quoted section of the statute but rather are claimed under 35 USC 120. One condition specified in 35 USC 120 is that the specification be amended to assert the claim. This

condition has been met. In the transmittal of this application filed on or about 24 July 2004 the following passage appears:

Amend the specification by inserting before the first line thereof the following:

--This application is a Continuation of copending PCT International Application No. PCT/JP02/00668 filed on January 29, 2002, which was published in JAPANESE and which designated the United States, and on which priority is claimed under 35 U.S.C. § 120, the entire contents of which are hereby incorporated by reference.--

From the above passage it is clear that the priority right claim is based on section 120 and not 119 of the statute.

It is respectfully submitted that all conditions required for a perfected claim of priority under 35 USC 120 have been met. It is undisputed that 35 USC 119(b)(3) empowers the Director to "require a certified copy of the original foreign application", but no such empowerment exists in 35 USC 120.

It is respectfully submitted that submission of a certified copy of the priority document is not required in this case. The Examiner is respectfully requested to provide the undersigned with authority for the request or withdraw it.

Issues Under 35 USC 103

The rejection in paragraphs 4 and 5 of all pending claims as obvious over US Patent 6,048,404 (White), US Patent 5,621,180

(Simon) and US Patent 5,863,789 (Komatsu) is traversed but has been rendered moot by the present amendments to the claims.

In the apparatus for extracting volatile constituents according to the claimed invention, a sample vessel containing a sample and filled with inert gas is kept at a temperature at which the sample is not thermally decomposed, using a thermostatic chamber, to thereby prevent evaporation of volatile constituents. On this basis, a canister depressurized in advance is selectively connected to the sample vessel to thereby rapidly depressurize the sample vessel to thereby rapidly evaporate volatile constituents of the sample and collect them in a canister with inert gas. Hence, volatile constituents contained in the sample in small quantities, and constituents low in volatility, are also collected in the canister together. This is an advantage that cannot be expected from the headspace method or the like.

In the headspace method seen in White, Simon and Komatsu, first, volatile constituents of a sample are evaporated in a sample vessel containing the sample, and then the volatile constituents collecting in the upper space of the sample vessel are collected in an evacuated chamber. In this prior method, a sample vessel containing the sample is kept still and warm or is heated to evaporate volatile constituents in large quantities. In this respect, the headspace method is essentially different from the claimed invention.

In the headspace method, the pressure in the sample vessel increases due to highly volatile constituents that have evaporated soon. This prevents slightly volatile constituents from evaporating. Hence, the headspace method is suitable for analysis of highly volatile constituents of a sample, but is not suitable for extraction and analysis of slightly volatile constituents. Furthermore, with the headspace method, quantitative analysis of the volatile constituents of a sample is difficult to carry out. Only qualitative analysis of them can be carried out.

Meanwhile, in the claimed invention, while evaporation of volatile constituents of a sample is prevented, a depressurized canister is connected to a sample vessel to thereby depressurize the sample vessel to thereby evaporate all the different volatile constituents of the sample at one time, irrespective of their differences in volatility. Hence, it is possible to collect all the different volatile constituents of a sample and carry out quantitative analysis thereof. Thus, the claimed invention is free from drawbacks seen in the headspace method.

Considering the feature that the sample vessel containing a sample is kept at a temperature at which the sample is not thermally decomposed, and the feature that the sample vessel is depressurized by connecting a canister and those constituents of the sample which evaporate due to this depressurization are collected in a canister, the claimed invention is not at all

obvious from the cited references.

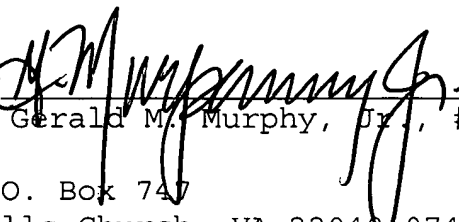
Conclusion

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact David R. Murphy (Reg. No. 22,751) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.


If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By 
Gerald M. Murphy, Jr., #28,977

P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000


GMM/DRM:anp
1131-0486P

Attachment(s):

(Rev. 02/12/2004)